REMARKS

Claim 1-5 remain in this application. No claims are allowed.

Summary of the Examiner's office communication:

The Examiner rejects claims 1 and 4 as unpatentable over USP 6,424,646 to Gerszberg in view of USP 4,272,656 to Nishikawa.

The Examiner rejects claim 2 as unpatentable over the patent to Gerszberg in view of the patent to Nishikawa and further in view of USP 3,932,712 to Suntop.

The Examiner rejects claims 3 and 5 as unpatentable over the patent to Gerszberg in view of the patent to Nishikawa, further in view of the patent to Suntop, and further in view of USP 5,216,704 to Williams et al.

Summary of USP 6,424,646 to Gerszberg et al:

The patent to Gerszberg et al provides a hybrid fiber, twisted-pair (HFTP) local loop 1 that includes (1) customer premises equipment (CPE) 10, (2) an intelligent services director (ISD) 22, (3) an access network server complex 38, and (4) a synchronous optical network (SONET) 42 that is connected to a number of additional networks such as 44, 46 and 48.

CPE 10 includes analog and digital telephones 15 and 18, facsimile devices 16, personal computers 14 and video-phones 130.

Access network server complex 38 includes a facilities management platform (FMP) 32 that connects to a main distribution frame (MDF) 28 to form a central office 34.

ISD 22 may be located within the home/business or it may be mounted exterior to the home/business. ISD 22 may operate from electrical power supplied by central office 34 and/or from power supplied by the customer's power company. When ISD 22 includes a modem it may be desirable to power ISD 22 with supplemental power from the home in order to enable optimal operation of the modem. (see col. 4, lines 18-26)

ISD 22 may connect to a variety of customer-premises devices such as 15, 18, 130, 15, 14, and/or other digital or analog devices, some or all of which may be connected with ISD 22 via single and/or multiple twisted-pair wires, and ISD 22 may be connected to central office 34 via a twisted-pair customer connection 30.

FIG. 2 provides a block diagram of ISD 22. As shown, ISD includes an interface device 110 having a residential interface 115 and a TVRC modem interface 114 for a digital subscriber line (DSL) modem.

A lifeline 126 interconnects residential interface 115 and TVRC modem interface 114, and thereby connects ISD 22 to the FMP 32 that is located in central office 34, to thereby provide continuous telephone service at CPE 10 in the event of a power failure at CPE 10. (see col. 4, lines 56-60)

As stated at col. 13, lines 35-54, FIG. 2's modem 114 provides an "always on" functionality and/or a "virtually always on" functionality that allows voice/data calls to be established virtually instantaneously without long delays.

Summary of USP 4,272,656 to Nishikawa:

In FIG. 1 of the this patent to Hishikawa a telephone system is shown wherein conversations pass between a telephone 20 and a Central Office by means of DC power. That is, voice messages are carried to and from telephone 20 by a modulated DC current. The Central Office converts AC power to DC power for energizing telephone 20 and telephone lines 26, and DC batteries are only used in a backup capacity for the AC power source. (col. 4, lines 6-18)

In this telephone system the Central Office includes a hybrid circuit 22 that (1) supplies telephone lines 26 with DC power, (2) provides a 2:4 wire conversion between telephone 20 and the Central Office's call-handling equipment 24, and (3) provides 4:2 wire conversion between the call-handling equipment 24 and telephone 20.

That is, DC power is used to power the audio and the signaling circuit that extends between telephone 20 and call-handling equipment 24, and a modulated DC current carries voice messages that pass over telephone lines 26. While batteries were initially used to energize telephone lines 26, today AC power is converted to DC power to energize telephone lines 26, and DC batteries are used only in a backup capacity for the AC power source. (col. 1, lines 11-24)

Summary of USP 3,932,712 to Suntop:

This patent to Suntop describes a telephone system wherein a 2-wire (28,30) telephone cable 12 connects a central office terminal 24 to a subscriber terminal 32 whereat a telephone 45 is located.

When telephone 45 is called, a DC path that includes the windings of hybrid transformer 22, the windings of hybrid transformer 23, 2-wire cable 12, the windings of hybrid transformer 40, and the windings of hybrid transformer 42 operates to apply a ringing current to telephone 45.

When telephone 45 goes "off-hook" to initiate a call the central office applies battery potential to telephone 45 via this DC path wherein dial pulses are applied to the central office by interrupting the DC path.

When a telephone connection has been established audio or data signals are applied to the windings of the four hybrid transformers, capacitors 21 and 43 acting as short circuits.

Summary of USP 5,216,704 to Williams et al:

This Williams et al patent its cited for its FIG. 1A showing wherein a subscriber location 14 includes an ISDN modem 18 that is powered by a local power supply 32 which is assisted by a battery backup system 34. Williams et al recognizes that storage batteries require periodic maintenance and have a finite life, and Williams et al recognizes that backup system 34 typically requires a DC-to-DC converter to generate the high operating voltages that are required by ISDN modem circuitry. At col. 5, lines 38-42, of Williams et al it is pointed out that typical voltages required to operate an ISDN modem are as high as 140 VDC.

Argument for the patentability of the claims remaining in this application:

The whole of the claims remaining in this application is directed to a telecommunications customer service terminal wherein the terminal's low voltage terminals are connected to associated equipment using telephone wire that is readily available to personnel that install the terminal.

In addition, the small, simple and inexpensive telecommunications customer service terminal of this invention (1) does not include and on/off switch, (2) the terminal includes a low-voltage DC power input terminal, (3) and this low-voltage power input terminal is telephone-

wire-connected to a low-voltage DC power supply. That is, only as long as the DC power supply provides a low voltage DC is the telecommunications customer service terminal operative.

As a feature of the invention, low-voltage DC power is supplied to the customer service terminal of the invention by selecting for use either a first power supply module whose input is a high voltage AC (for example, 110 VAC) and whose output is a low voltage DC (for example, 24 VDC), or a second power supply module whose input is a high voltage AC and whose output is a low voltage DC, this second power supply module including a manually removable/replaceable DC battery pack that operates to supply the low voltage DC output should the high voltage AC input to this second power supply module fail.

When the Examiner cites the patent to Gerszberg, the Examiner states "Gerszberg discloses supplying power from the central office during lifeline situations."

It is respectfully submitted that lifeline 126 (see FIG. 2) located within Gerszberg's intelligent services director (ISD) 22 (FIG. 1) does not supply operating power to Gerszberg's customer premises equipment (CPE) 10 in the event of a power failure at CPE 10.

Rather, and as stated at col. 4, lines 56-60 of Gerszberg, all that lifeline 126 does is to connect ISD 22 to the facilities management platform (FMP) 32 that is within central office 34.

In support of this argument Newton's Telecom Dictionary is cited for its definition of the term "Lifeline Service" wherein this term is defined as "a minimal telephone service designed for the poor and elderly to assure that they can be reached by phone and have a 'lifeline' to the world in case of emergency."

The Examiner calls attention to the "always on and/or virtually always on" functionality of modem 114 in FIG. 2 of Gerszberg (see col. 13, lines 35-55). However, modem 114 is not a customer services terminal as is defined in detail in applicants' claims, and this "always on and/or virtually always on" functionality of Gerszberg's modem 114 relates not to energization of the modem, but to rather to how long a delay is provided by the modem relative to voice/data calls.

In accordance with a reading of the Gerszberg patent, it is respectfully submitted that Gerszberg does not teach "an ISD that is always on (i.e. built in the absence of an on/off switch) so long as power is supplied", as stated by the Examiner.

Clearly, Gerszberg does not teach a customer service terminal having low voltage terminals and the use of conventional telephone wire to connect the customer service terminal to

external devices such as a digital subscriber line, analog telephones, low voltage data terminals, and a low voltage power supply.

In addition, Gerszberg does not teach the simplicity that is provided when a customer services terminal is devoid of an on/off switch, so that the terminal is turned on simply by connecting its low voltage power input terminal to a low voltage power supply.

Turning now to the Nishikawa patent, this patent teaches that DC power is used to power audio and signaling circuits that extend between a telephone and call-handling equipment, with modulated DC current carrying voice messages that pass over the telephone lines. While DC batteries were used in the past to energize the telephone lines, in modern telephone communication systems AC power is converted to DC power, this DC power is used to energize the telephone lines, and DC batteries are used only in a backup capacity for the AC power.

It is respectfully submitted that if the Gerszberg arrangement were modified in accordance with the teachings of the Nishikawa patent, Gerszberg's telephone lines would be powered by Nishikawa's AC-to-DC conversion, and battery backup would be provided. That is, battery backup would be provided only for the energization of Gerszberg's telephone lines.

This is not the arrangement claimed in the present application wherein a customer service terminal is devoid of an on/off switch, such that the customer service terminal is turned-on merely by connecting the low voltage DC output of a high-voltage-AC-to-low-voltage-DC power supply to the low voltage DC power input of the customer service terminal.

The Examiner cites Suntop for the proposition that it would be obvious to use a suitable AWG telephone wire between a central office and the customer's premises. True, Suntop does teach using a 2-wire telephone cable to connect a central office terminal to a subscriber terminal 32.

However this teaching falls far short of the requirements of the whole of the present invention wherein the low voltage terminals of a telecommunications customer are connected to associated equipment using telephone wire, the benefit being that telephone wire is readily available to installation-personnel because quantities of telephone wire are stored in the personnel's telephone installation truck. (see for example page 2, lines 10-18 of the present specification)

Relative to claims 3 and 5 that require manually removable battery pack, the Examiner (1) cites Gerszberg as teaching an ISD that is always-on so long as power is supplied, (2) cites

Nishikawa as teaching backing up of AC power of a central office with batteries, (3) cites Suntop as teaching the use of a 2-wire telephone cable to connect a central office terminal to a subscriber terminal, and (4) cites Williams as teaching that batteries used in a power backup system need to be replaced because they have a finite life.

Again it is respectfully pointed out that Gerszberg teaches only that the "always on and/or virtually always on" functionality of Gerszberg's modem relates not to energization of the modem, but to rather to how long a delay is provided by the modem in handling voice/data calls. That is, Gerszberg is completely silent as to the presence of an on/off switch for the modem, and notice should be taken that modems do in fact include on/off switches.

The Nishikawa patent teaches that DC power is used to power audio and signaling circuits that extend between a telephone and call-handling equipment (with modulated DC current carrying voice messages), that is DC power can be supplied by converting AC to DC and then using the DC to energize the telephone lines, and DC batteries can be used only in a backup capacity for the AC power.

Again it is respectfully pointed out that the whole of claims 3 and 5 requires a very specific configuration that includes a backup battery, and this specific configuration does not relate to the provision of a battery backup for circuits that extend between a telephone and call-handling equipment.

Clearly, the Suntop patent teaches using telephone wire to connect a central office terminal to a subscriber terminal. However, again this teaching fails to provide the feature of the present invention whereby a plurality of telephone wire lengths are used to connect the low voltage terminals of a customer service terminal to low voltage equipment that is associated with the customer service terminal.

Relative to the cited patent to Williams et al it is respectfully submitted that this patent merely teaches that a device such as a modem can be powered by a local power supply that is assisted by a battery backup system, Williams et al additionally recognizing that storage batteries require periodic maintenance and have a finite life.

No claim related fees are believed to be due with this response. In the event any such fees are due, please debit Deposit Account 08-2623.

Reconsideration and allowance of this amended application is respectfully requested.

Respectfully submitted,

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